Federal Aviation Administration

Engine and Propeller Directorate

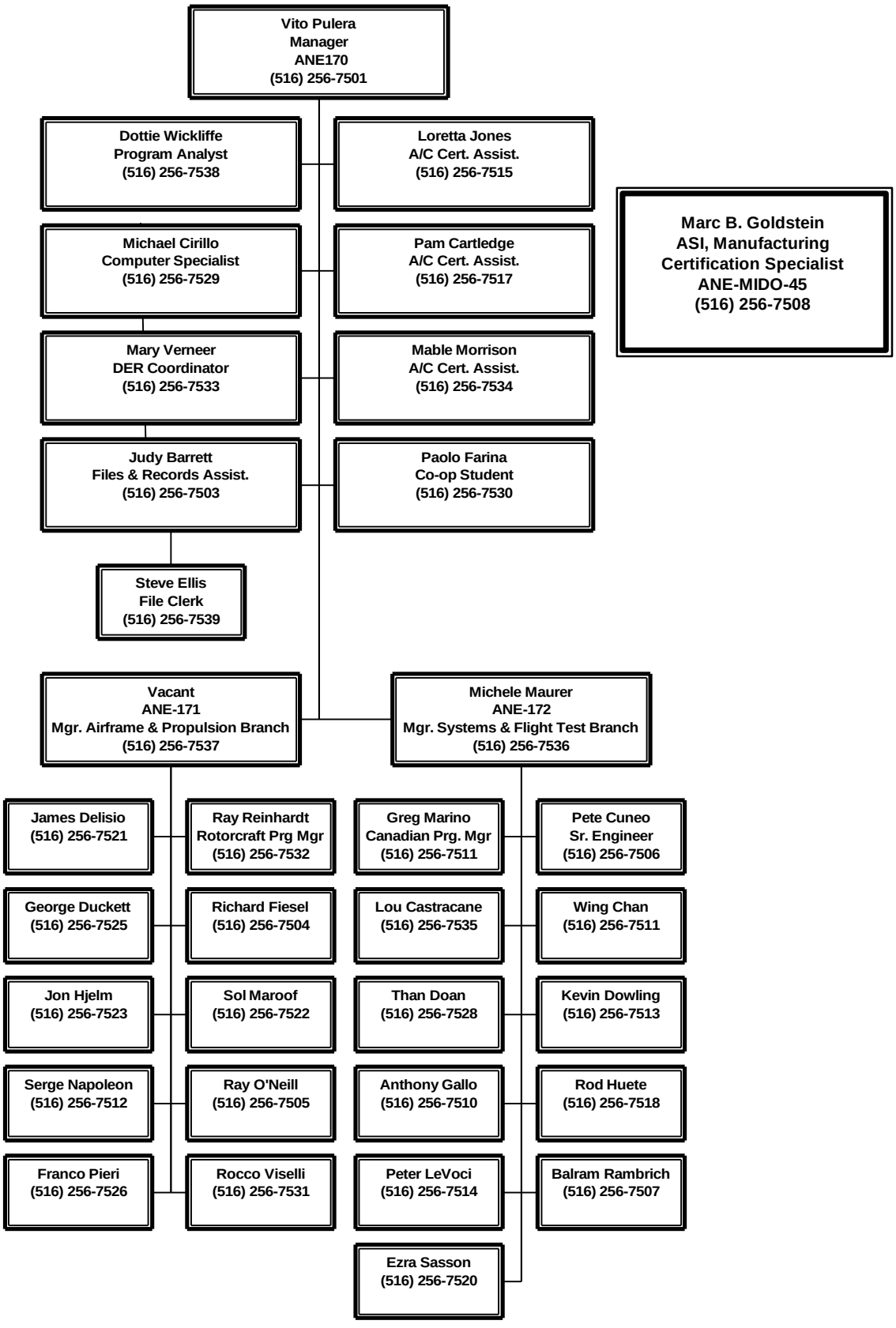
DER Recurrent Seminar

General Session

May 5, 1999

Uniondale, New York

New York Aircraft Certification Office



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Policy Update

Rules, Orders, Notices, ACs, TSOs, and Internet Information

Kevin Kendall
AFS-610
405 954-7074
kevin.kendall@faa.gov

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Part 25 Final Rules

- **Amdt. No. 25-96, Fatigue Evaluation of Structure** - effective 4/30/98
  - Amends the fatigue requirements for damage-tolerant structure on transport category airplanes to require a demonstration using sufficient full-scale fatigue test evidence that widespread multiple-site damage will not occur within the design service goal of the airplane; and inspection thresholds for certain types of structure based on crack growth from likely initial defects
  - Richard Yarges, ANM-115 (425) 227-2143
- **Amdt. No. 25-97 -Braked Roll Conditions**, effective 6/26/98
  - Adds a new design standard that requires that the airplane be designed to withstand main landing gear maximum braking forces during ground operations. Eliminates differences between theFARs and JARs.
  - Jim Haynes, ANM-115, (425) 227-2131.
- **http://www.faa.gov/avr/arm/nprm/nprm.htm**

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Part 25 Final Rule

- Amendment **25**-93 - Revised Standards for Cargo or Baggage Compartments in Transport Category Airplanes, effective February 17, 1998
  - Upgrade the fire safety standards for cargo or baggage compartments in certain transport category airplanes by eliminating Class D compartments as an option for future type certification. Compartments that can no longer be designated as Class D must meet the standards for Class C or Class E compartments, as applicable. The Class D compartments in certain transport category airplanes manufactured under existing type certificates and used in passenger service must meet the fire or smoke detection and fire suppression standards for Class C compartments by early 2001 for use in air carrier, or most other commercial service. The Class D compartments in certain transport category airplanes manufactured under existing type certificates and used only for the carriage of cargo must also meet such standards or the corresponding standards for Class E compartments by that date for such service. ANM-114, Transport Airplane Directorate, (425) 227-2114.
  - http://www.faa.gov/avr/arm/nprm/nprm.htm

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Part 25 Final Rule-

- **Amendment No. 25-92, Improved Standards for Determining Rejected Takeoff and Landing Performance**, effective 3/20/98
  - Revise the method for taking into account the time needed for the pilot to accomplish the procedures for a rejected takeoff
    - takeoff performance be determined for wet runways; and require that rejected takeoff and landing stopping distances be based on worn brakes. Harmonize with revised standards of the JAR-25. Not being applied retroactively
    - Donald K. Stimson, ANM-111, (425) 227-1129
- **Amdt. No. 25-98, Revision of Gate Requirements for High-Lift Device Controls**, effective 3/10/99
  - Revise the requirements concerning gated positions on the control used by the pilot to select the position of an airplane's high-lift devices. Harmonizes these standards with those being adopted by the JAA
  - Don Stimson, ANM-111, (425) 227-1129

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Part 23, 25 and 33 Final Rule
Rain and Hail Ingestion Standards

- These amendments revise certification standards for rain and hail ingestion for aircraft turbine engines.
  - address engine power-loss and instability phenomena attributed to operation in extreme rain or hail that are not adequately addressed by current requirements.
  - harmonize these standards with rain and hail ingestion standards being amended by the Joint Aviation Authorities (JAA).
- Amendment Nos. 23-53, 25-95, and **33**-19
- Published March 26, 1998
- EFFECTIVE DATE: April 30, 1998.
- John Fisher, ANE-110, Engine and Propeller Directorate, (781) 238-7149

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Emission Standards for Turbine Engine Powered Airplanes; Final Rule

- Amendment 34-3
- Revises the emission standards for turbine engine powered airplanes to incorporate the current standards of the ICAO for gaseous emissions of oxides of nitrogen and carbon monoxide.
- EFFECTIVE DATE: February 3, 1999.
- Issued on January 20, 1999.

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NPRM-Part 36

Noise Certification Standards for Propeller-Driven Small Airplanes

- The FAA is proposing changes to the noise certification standards for propeller-driven small airplanes.
- Harmonize the FAR and JAR requirements for propeller-driven small airplanes.
- Issued November 18, 1998
- Comments must be received on or before January 19, 1999.
- Mehmet Marsan, AEE, (202) 267-7703.

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NPRM No. 98-10, Harmonization of Critical Parts Rotorcraft Regulations

- Amend the airworthiness standards in Parts 27 and 29
  - to define critical parts
  - Require a critical parts plan to establish procedures that would require the control of the design, substantiation, manufacture, maintenance, and modification of critical parts.
  - Comment Period Closed
- Carroll Wright, Rotorcraft Directorate, (817) 222-5120.
- Published in the Federal Register on August 24, 1998 (63 FR 45130)

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NPRM - Part 27 Normal Category Rotorcraft Maximum Weight and Passenger Seat Limitation

- This notice proposes to amend the **airworthiness** standards for normal category rotorcraft. This proposal would increase the maximum weight limit from 6,000 to 7,000 pounds and add a passenger seat limitation of nine. The increase in maximum weight is **proposed** to compensate for the increased weight resulting from additional regulatory requirements, particularly recent requirements intended to improve occupant survivability in the event of a crash. These changes are intended to update current **airworthiness** standards to provide the safety standards for normal category rotorcraft of 7,000 pounds or less.
- Issued June 25, 1998
- Lance Gant, Rotorcraft Standards Staff, (817) 222-5114

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NPRM - Parts **27** and 29 Rotorcraft Load Combination Safety Requirements

- Amend standards for rotorcraft load combination (RLC) certification. This proposal would revise the safety requirements for RLC's to address advances in technology and to provide an increased level of safety in the carriage of humans. These **proposed** amendments would provide an improvement in the safety standards for RLC certification and lead to a harmonized international standard.
- Published July 13, 1998
- Mr. Mike Mathias, Rotorcraft Directorate, (817) 222-5123.

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Orders Issued/Revised

- 8100.8-Designee Management Handbook
- 8110.37C - DER Handbook

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Notices Issued

- **Notice 8110.71-Guidance for the Certification of Aircraft Operating in High Intensity Radiated Field Environments**
  - Provides requirements for HIRFcertfication until harmonized FAR/JAR rule is issued.
  - Requires ACOs to issue special conditions on a case-by-case basis
  - Requirements based on those adopted by theElectromagenetic Effects Harmonization Working Group ARAC
  - http://www.faa.gov/avr/air/air100/n8110_71.pdf
- **Notice 8110.72 - Structural Designated Engineering Representatives Approvals of Alternative Methods of Compliance to Airworthiness Directives and AD Mandated Repairs**
  - Allows certain manufacturer's structural DERs to approve alternate methods of compliance

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Notices Issued

- **Notice 8110.76 - DER to Designated Inspection Representative Notification Process**
  - Allows DERs to process 8120-10, Request for Conformity, without ACO review
  - Must have coordinated up-front conformity plan that prescribes which RFCs may be processed without FAA involvement
  - Plan defines tracking and paperwork requirements and methods for resolving unsatisfactory findings
- **Notice 8110.77 - Guidelines for the Approval of Field-Loadable Software**
  - Applicable to TC, ATC, STC, TSO
  - Additional policy being developed to address PMA
  - Supplements DO-178B
  - www.faa.gov/avr/air/air100/sware/sware.htm

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Notices Issued

- **Notice 8110.78 - Guidelines for the Approval of Software Changes in Legacy Systems Using RTCA DO-178B**
  - Clarifies requirements in 178B
  - Provides guidance on the application of DO-178B to software changes made to systems developed under 178 or 178A
  - Available at wwwfaa.gov/avr/air/air100/sware/sware.htm

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Advisory Circulars Issued

- **21-40 Application Guide for Obtaining a Supplemental Type Certificate**
  - Provides information and guidance regarding procedures for obtaining a supplemental type certificate for typical modification projects.
  - http://www.faa.gov/avr/air/acs/achome.htm
- **25.629-1A, Aeroelastic Stability Substantiation of Transport Category Airplanes**
  - Compliance with the provisions of part 25 of the dealing with the design requirements for transport category airplanes to preclude the aeroelastic instabilities of flutter, divergence and control reversal.
- **23.1419-2A, Certification of Part 23 Airplanes for Flight in Icing Conditions.**
  - Compliance with the ice protection requirements Part 23.

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Proposed Advisory Circulars

- **25-XX, Certification of Transport Airplane Electrical Equipment Installations**
  - Guidance on compliance with the certification requirements for transport airplane electrical systems and equipment installations.
  - Comments period closed.
  - John McGraw, Manager, ANM-111
- **25-XX, Certification of Transport Airplane Mechanical Systems**
  - Provides methods acceptable for showing compliance with the provisions of subparts D and F of 14 CFR part 25 regarding the type certification requirements for transport airplane mechanical systems.
  - Comments due April 12, 1999.
  - Mahinder Wahi, ANM-112, (425) 227-2112.
- **25-XX, Certification of Transport Airplane Structure**
  - Showing compliance with the provisions of subparts C and D of 14 CFR part 25 regarding the type certification requirements for transport airplane structure.
  - Katherine Burks, Transport Standards Staff, (206) 227-2114.

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Proposed Advisory Circulars

- **25.803-1A, Emergency Evacuation Demonstrations**
  - Provides guidance on compliance with FAR concerning (1) conduct of full-scale emergency evacuation demonstrations, and (2) use of analysis and tests in lieu of conducting an actual demonstration.
  - Terry Rees, ANM-115, 425 227-2138
- **25.1419-1X, Certification of Transport Category Airplanes for Flight in Icing Conditions**
  - Guidance for certification of airframe ice protection systems on transport category airplanes.
  - Kathi Ishimaru, ANM-112, (425) 227-2674
- **23-XX-26, Powerplant Guide for Certification of Part 23 Airplanes**
  - Provides guidance on compliance with 14 CFR part 23, subpart E, powerplant installation in normal, utility, acrobatic, and commuter category airplanes. Consolidates existing policy documents and certain AC's that cover specific paragraphs of the regulations, into a single document.
  - Scott Sedgwick, ACE-110, (816) 426-6941

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Proposed Advisory Circulars/Revisions

- **34-1, Fuel Venting and Exhaust Emissions Requirements for Turbine Engine Powered Airplanes**
  - Provide section-by-section guidance on 14 CFR Part 34.
  - Edward McQueen, AEE-110, (202) 267-3560
- **23.1309-1(C) - Proposed Revisions -Equipment, Systems, and Installations in Part 23 Airplanes**
  - Provides guidance and information for an acceptable means for showing compliance with the requirements of Sec. 23.1309(a) and (b) (Amendment 23-49) for equipment, systems, and installations in Title 14 CFR Part 23 airplanes.
  - Terre Flynn, ACE-111, (816) 426-6941
- **23.1311-1A - Proposed Revisions - Installation of Electronic Displays in Part 23 Airplanes**
  - Acceptable means of showing compliance applicable to the installation of electronic displays in Part 23 airplanes
  - Terre Flynn, ACE-111, (816) 426-6941

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Proposed Advisory Circular Revisions

- **AC 27-1A & AC 29-2B - Proposed Changes**
  - Provides guidance as to an acceptable means of accomplishing the requirements of a proposed rule on the subject of requirements for a critical parts plan for normal and transport category rotorcraft.
  - Guidance to comply with the proposed rules on the subject of normal and transport category rotorcraft load combination safety requirements and on the subject of normal category rotorcraft maximum weight and passenger seat limitation
- **Kathy Jones, Rotorcraft Standards Staff, (817) 222-5961,**

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TSO's from
http://www.faa.gov/avr/air/AIR100/tsohome.htm

- **TSO-C127a Rotorcraft, Transport Airplane, and Normal and Utility Airplane Seating Systems.** (8/21/98)
- **TSO-C137 Aircraft Portable Megaphones. (7/20/98)**
- **TSO-C144 Airborne Global Positioning System Antenna. (3/12/98)**
- **TSO-C145 Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS). (5/15/98)**
- **TSO-C147 Traffic Advisory System (TAS) Airborne Equipment. (4/6/98)**
- **TSO-C149 Aircraft Bearings. (4/24/98)**
- **TSO-C150 Aircraft Seals. (4/24/98)**

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DER HANDBOOK ORDER 8110.37C

UPCOMING REVISIONS TO
BECOME ORDER 8110.37C

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FORMAT CHANGES

- Text material changed to two column format
- Text material divided into eight chapters
  - Chapter 1 General
  - Chapter 2 Authority and Limitations
  - Chapter 3 Qualification Requirements
  - Chapter 4 Appointment
  - Chapter 5 Administration
  - Chapter 6 Certification Activities
  - Chapter 7 DER Oversight
  - Chapter 8 DER Guidance Material

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NEW DEFINITIONS

- Definitions Added:
  - Applicant
  - Compliance Inspection
  - Field Approval

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COMPANY DERs

- Policy added to address Company DERs assigned to:
  - Consortiums, Business Arrangements, Licensing Agreements, etc
    - Written Request from Company for expanded delegation will be sent to appointing ACO
    - If expanded delegation involves two geographic ACO areas of responsibilities, ACOs will determine Managing ACO

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DUAL APPOINTMENTS

- Policy added to clarify management of DERs with dual appointments
  - Should be managed by same appointing ACO
  - When dual appointments involve two ACO geographic areas of responsibilities, ACOs will determine managing ACO

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CANDIDATE AUTHORITY

- Clarification of DER Candidate Authority
  - Not authorized to approve data
  - May review and submit data to FAA Which demonstrate ability to function as a DER
  - Will **only** be delegated as a DER after demonstrating this ability to the ACO

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USE OF "RECOMMEND APPROVAL"

- Clarification of DER use of "Recommend Approval"
  - Limited to delegated functions authorized on FAA Form 8110-25

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EXPERIENCE CRITERIA

- Revised policy concerning experience working with FAA requirement
  - Significant experience in direct working relationship
  - Processing engineering data related to type approval
  - Must indicate applicant is versed in technical and procedural requirements

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DER Administration

- Added requirement for DER advisor to be identified in DER appointment letter
- Added requirement for DER to be notified if DER advisor changes
- Added requirement for DER candidate advisor to be identified in acceptance of qualification letter
- Added requirement that DER candidate to be notified if advisor changes
- Revised FAA Form 1770-7 Requirements

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DER Administration

- Defined contents of DER file
  - DER application
  - Appointment letter
  - Renewal letters
  - FAA Form 8110-3 submittals
  - Tracking forms
  - Evaluation forms
  - Records of discussion
- Incorporated conflict of interest policy previously found in FAA Notice 8110.63

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DER Administration

- Added requirement for marking or flagging files of DERs determined to have potential conflict of interest
- Added requirement for written summary of conflict of interest oversight evaluation
- Added yes or no check blocks on DER Evaluation Form, Figure 14, Appendix 3, for executive level conflict of interest
- Added requirement for DER problems incurred by ACO other than appointing ACO to be reported in writing to appointing ACO

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Certification Activities

- Added certification plan elements to be considered by DER
- Clarified requirement for DER to notify applicant when separate approvals will be required for noise or emissions
- Added requirement for appropriate airworthiness requirement to be referenced on on FAA Form 8110-3 when approving service documents

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Repairs and Alterations

- Revised major repairs and alteration policy
- Revised minor repairs and alteration policy
- Added requirement for note on FAA Form 8110-3 to indicate approval does not include compliance inspection

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Repairs and Alterations

- Added policy concerning approval of process specification associated with repairs
  - Should remind repair station to coordinate with FSDO
  - Should not approve generic process specifications
  - Should not approve shop practices

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Limitations/Authorizations

- Revised Appendix 1, Limitations on DER Functions, in accordance with ACOMT recommendation
  - Limitations are now identified as things normally reserved for the FAA

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REVISION C CHANGES

- Added specific requirements for structural DERs with a delegated function of fatigue analysis
- Rescinded authority to an appoint an applicant, who does not have a legal permanent residence in the US, as a DER
- Revised FedWorld access information
- Updated Appendix 4, ACO Addresses

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Order 8100.8
Designee Management Handbook

A Standardized Designee Selection and Appointment Process

Designee Standardization Team (DST)

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DST Charter

...“establish a unified national selection and appointment process for manufacturing and engineering designees.”

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DST Objectives

- To develop a unified process that would ensure the unbiased selection and appointment of the most qualified engineering or manufacturing designee to represent Aircraft Certification
- To better define the roles and responsibilities of all key players in the selection and appointment process
- To develop a level of confidence in the integrity of the system such that acceptance by all offices of an appointment decision is the norm.

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What Does the DST Selection and Appointment Process Look Like?

Key process improvements...

- **Defined appointment cycle time**
- **Panel approach**
  - Evaluation Panel decision/sign-off
  - Appeal Panel and defined process for appeals

continued...

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What Does the DST Selection and Appointment Process Look Like?

Key process improvements...

- **Documentation**
  - Standardized application package
  - Clearly defined and consolidated appointment criteria
  - Standardized applicant correspondence
  - Process Checklist
  - Knowledge based questionnaire
  - Designee Working Agreement

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What Does the DST Selection and Appointment Process Look Like?

New Key Players...

- **Appointment Process Coordinator (APC)**
  - The FAA individual that initiates the formal selection, orientation, and appointment review process and coordinates all subsequent FAA actions
- **Advisor**
  - An ASE (Aircraft Safety Engineer) or ASI (Aviation Safety Inspector) or FTP (Flight Test Pilot) assigned to the designee applicant and performs the initial evaluation and continuous oversight after appointment.

continued...

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What Does the DST Selection and Appointment Process Look Like?

New Key Players...

- **Evaluation Panel (EP)**
  - Two or more technical specialists (ASE, ASI, FTP,...) assigned to evaluate a designee applicant's qualifications against standards in order to determine appointment/ candidacy/denial and delegated authority as appropriate
  - **Appeal Panel**
  - Two or more office managers and/or senior ASE/ASI/FTP assigned the task of determining if the Appointment Process was conducted properly in the event of an designee applicant's appeal of the FAA's decision

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Process Overview

Steps in the Process...

- Application Package
- Initial Application Processing
- Application Evaluation
- Evaluation Panel Review
- Appointment/Candidate/Denial/Other
- Appeals

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Process Overview

Non-standard appointments...

- **Request for expanded delegations**
  - For DERs, all requests to expand delegations will be reviewed by the FAA Advisor to determine whether an EP needs to be formed.
- **Dual DER appointments**
  - Any requests for dual DER appointments (company/consultant) will be reviewed by the FAA Advisor to determine whether an EP needs to be formed.

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Process Overview

Non-standard appointments...

- **Transfer appointments**
  - When a designee changes residence or the employer moves to another ACO geographical area, the designee must re-apply to the new ACO. The designee should notify the previous appointing ACO so that they can cancel their appointment and transfer any records to the new office. The new manager has the discretion to use the EP process for these requests or deny based on need.

Note: *The object of a standard appointment process is to develop a level of confidence in the integrity of the system such that acceptance by all offices of an appointment decision is the norm.*

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Will this process require persons who are already designees but applying for a new designation to go through the EP process? to be interviewed?

The FAA Advisor, with concurrence from management, will determine if an EP needs to be formed. (Sec. 306)

Will existing candidates fall under this process once it's implemented if they have not been appointed?

Yes, however they would fall into the same category as an existing designee requesting an expansion to their delegation. In these cases the Advisor with concurrence from the office manager would determine if an EP is needed.

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STCs IN A GLOBAL ENVIRONMENT

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Discussion Outcome Needed

- Better understanding of the complexities involved with "global" STC questions.
- Standardization among ACOs in their treatment of "global" STC issues.
- Possible working group to address AIR/AFS common issues related to "global" STCs.

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DRIVERS OF THE CURRENT FAA STC WORKLOAD

- Aircraft financing/leasing arrangements that include requirements for FAA approvals
- CAA's lack of familiarity with U.S. products
- General acceptance of an FAA approval by the global community
- Marketing/business opportunities (especially for DAS)

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THE "GLOBAL" STC ISSUE

- Applicants are proposing complex projects:
  - foreign state of registry
  - foreign installation demonstration
  - multiple STC installations outside the U.S.
  - use of foreign repair stations where some parts manufacturing would be required.
- Bilateral agreements do NOT include acceptance ofSTCs either by the U.S. or by the partner country (except Canada.)
- STCs are being transferred internationally, which is not consistent with current policy on grantingSTCs.

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THE "GLOBAL" STC ISSUE (cont.)

- Bilaterals also do not contain production oversight provisions for the manufacturing of replacement parts associated with STCs.
- The philosophy that an ACO is only approving "data" does not apply. Manufacturing possibilities must be considered because the FAA is the State of Design for the STC. Policy does not allow the production options of PC and PMA outside the U.S., so what regulatory control can the FAA exercise over how the design data is used/applied?

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CURRENT "GLOBAL" STC POLICY

Guidance on Foreign Applicants:

- **AC 21-23, Para. 20 d. (1987)**
  - "Unless specifically covered by the applicable BAA, the FAA does not issue STC's to non-U.S. applicants located outside of the country where the affected aircraft, engine or propeller was manufactured, because of the undue burden of administering the applicable requirements."
  - **FAA Order 8110.4A, para 27a. (3)(d) (1995)**
  - "An STC will not be issued to:

    Manufacturers or applicants outside of the U.S. unless the product receiving the initial alteration can be made available at a suitable location for FAA personnel to complete the necessary conformity and compliance inspection (except the items covered by reciprocal agreement.)"

  Note: AIR-1 asked that this reference be corrected in 1997.

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CURRENT "GLOBAL" STC POLICY (cont.)

- **FAA Order 8110.4A, para 31**
  - Describes how a U.S. applicant can obtain a Canadian STA.

- **Transfer Policy**
  - Current AIR policy is silent on transfers outside the U.S.
  - Notice under development by AIR-100 to define how TC and STC transfers should occur internationally.

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CURRENT "GLOBAL" STC POLICY (cont.)

Production Guidance:

- **14 CFR 21.119, FAA Order 8120.2 (Chapter 2 and Chapter 5)**
  - Provides for the issuance of a Production Certificate or a Parts Manufacturing Approval to the holder of an STC.
  - FAA PCs and PMAs are not granted outside the U.S. due to undue burden.
- **FAA Order 8000.50**
  - Permits owner/operator manufacturing of parts, but AFS does not interpret this order as applicable outside the U.S. because AFS does not have the expertise or resources to oversee production per 14 CFR 21.303.
  - This order is under revision by AIR-100/AIR-200/AFS-300.

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CURRENT "GLOBAL" STC POLICY (cont.)

- **AIR-200 Policy Memo "Guidance for Developing Undue Burden and No Undue Burden Decision Papers"** (May 1997, rev. April 1998)
  - requires decision papers (documenting undue burden or no undue burden) to be developed for the "initial grant" of an STC involving other countries (e.g. foreign registry, foreign installation, foreign applicant).

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FUTURE "GLOBAL" STC POLICY

- FAA recognition of STCs from bilateral partner countries, with full State of Design responsibilities in that country.
  - requires BASA Implementation Procedures for Airworthiness (IPA) (with STC provisions) and possibly Maintenance Implementation Procedures (to allow for the acceptance of repair data.)

WE AREN'T THERE YET!!

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(1) FOREIGN REGISTRY ISSUES (Test article that is not N-registered)

- In the past, ACOs have accommodated applicants who have proposed changes to aircraft on another country's registration. Notification of these proposed changes was not consistently given to the State of Registry. . . AIR is correcting this practice.
- *Why? State of registry is accountable under ICAO for the airworthiness of aircraft on their registry. These determinations cannot be made by another member State without permission.*
  - Be aware that FAA and ICAO are undertaking Safety Assessment activities to ensure that ICAO member states have a system in place that meets ICAO requirements. States are also more sensitive to liability issues with modifications to their fleet (e.g., Norway, France, Indonesia).

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(1) FOREIGN REGISTRY ISSUES (Test article that is not N-registered)

- Configuration assumptions--another authority controlled this aircraft. What data does the ACO have on its current configuration? What assurances are we accepting prior to authorizing its modification?
- FAA must be sensitive to continued airworthiness concerns. U.S. is the State of Design for the STC. Are we receiving service data (14 CFR 21.3)? Do we communicate with foreign operators/owners?
- Given FAA resource constraints, are such approvals an appropriate use of AIR's resources? *"This work should be taken off our plates for one-time only STCs."*

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(2) TEST ARTICLE INSTALLATIONS OUTSIDE THE U.S.

- AIR-200 policy guidance memo requires an undue burden decision paper for proposals that involve another country. AIR management can then review and approve these cases.
- Each STC situation needs to be reviewed on a case-by-case basis. Use of designees may be appropriate, however, where flight testing is required, more significant FAA involvement may be warranted.
- Conformity of any parts manufactured outside the U.S. must be assured.
- *If the test article is foreign-registered (1) AND the installation is outside the U.S., why is the FAA involved? There is no U.S. safety interest without future U.S. applications of the STC.*

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(3) FOREIGN PARTS MANUFACTURING

- Production under an STC requires a U.S. production approval for parts (PMA or PC).
- The STC holder has to be accountable to the FAA for any manufacturing outside the U.S.
  - there are no PMAs issued outside the U.S.
  - there are no FAA PCs issued outside the U.S.
  - the only provisions for manufacturing at a foreign repair station is as an owner-operator.

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(4) FOREIGN APPLICANT

- Per policy (AC 21-23), STC are not issued to foreign applicants because of undue burden.
  - At the same time, U.S. applications should be seriously scrutinized if it appears the applicant may be acting on behalf of a foreign entity.
- BAAs (except Canada) do not provide for the recognition of STCs from another country. Under the new BASA IPA, recognition may be considered on a country-by-country basis.
  - Requires a shadow certification/assessment.
  - The first demonstration of BASA STC competency is likely to be Israel (using a Boeing product).

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(4) FOREIGN APPLICANT (cont.)

- One prototype STC project where findings were made by another authority was authorized with the LBA (New York ACO.) Because of difficulties during this prototype, New York ACO recommended that more projects needed to be done to give the LBA more exposure to FAA procedures and for FAA to become more familiar with LBA procedures, especially delegation and the ability to require compliance with FAA policies that may differ from the LBA's.
- Based on this experience, AIR-1 has determined that:
  - BASA provisions for STC will only be granted on a country-by-country basis after an examination of the partner authority's system for STC approval.
  - This issue is being discussed with the JAA. No other countries or projects have been approved.

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(4) FOREIGN APPLICANT (cont.)

- Initial BASA IPA recognition is likely only forSTCs on the partner country's own products.
  - For U.S. designs a "shadow certification" demonstration will be required.
- FAA recognizes that STC continued airworthiness concerns would be better controlled if the local authority has responsibility. However,BAAs are based on an authority's knowledge of its own manufacturers and its own type designs. STC authorization increases the expectations of competency for both sides.

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(5) FOREIGN HOLDER OF AN STC VIA AN STC TRANSFER

- AIR philosophy needs to be consistent concerning applicants and holders of STCs:
  - If an STC cannot be issued to an applicant outside the U.S. because of undue burden, **it should not be transferred to a holder outside the U.S.**
  - There are undue burden issues with both a foreign applicant and a foreign STC holder. Is the new STC holder competent to assume its STC responsibilities (14 CFR 21.3)? How has the FAA made this determination?
  - Without transfer of the authority oversight responsibilities, FAA remains State of Design.
- AIR-110 notice will address FAA's "recognition" of such transfers.

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AIR/AFS INTERFACE ISSUES

- Educating others on what is required for an FAA-approved STC installation (more than use of a FAR 145 repair station).
- Modifications to N-registered aircraft must be done using approved parts that conform to approved data
  - who will take responsibility for parts manufacturing in foreign repair stations?

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NEXT STEPS

- Coordination and issuance of AIR-110 Notice on TC/STC transfers internationally
- Revision to Order 8110.4
- Continued discussion with JAA on IPA text related to STCs.
- Negotiations of new BASA IPAs with individual authorities
  - shadow certifications where warranted

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Designee Web Page

- As of April 1999 we have established a web page for the benefit of FAA Designees
  - Background/History
  - Application
  - Reference
  - Training
  - News
  - FAQ
  - Related Initiatives

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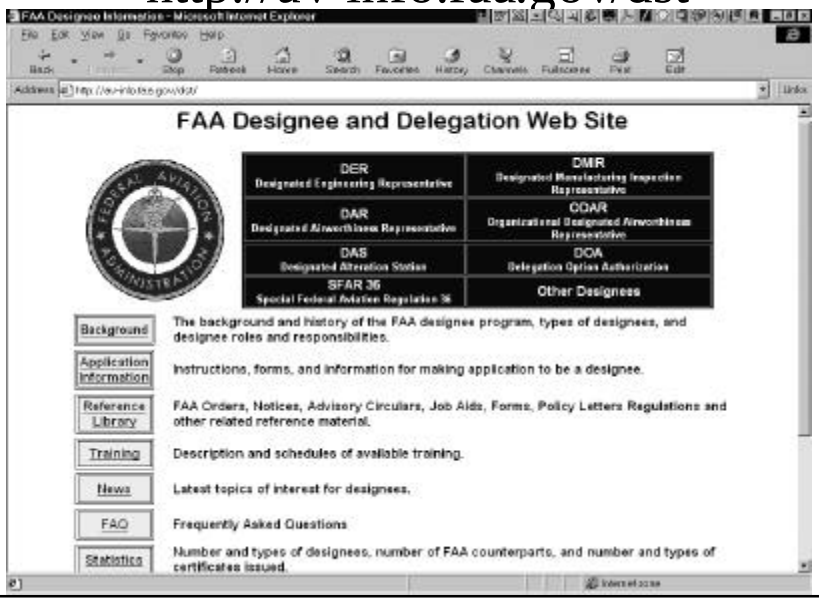
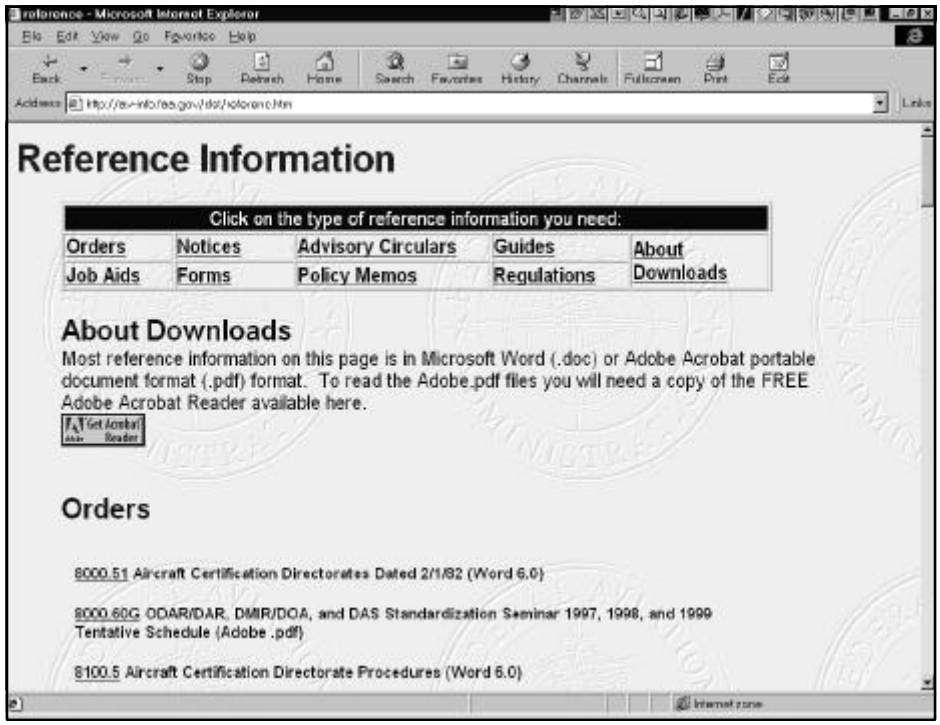
http://av-info.faa.gov/dst





Aviation Data on the Web

The Federal Aviation Administration, Regulatory Support Division, AFS-600 maintains aviation data in multiple databases.
These include:

- Service Difficulty Reporting System (SDRS)
- Accident/Incident Data System (AIDS)
- Enforcement Information System (EIS)
- Maintenance Alerts
- Vitals Information System (VIS)
- Airworthiness Directives (Ads)
- Advisory Circulars (Acs)
- STC Information
- Airmen Testing and Training

Official data is available from government sites; ie,***.gov. Much additional useful information is available on other public or commercial sites. Listed below are a few of these sites and a brief summary of data available:

av-info.faa.gov
- Airline Certificate Information
- Aircraft Information
- Service Difficulty Reports
- Accidents (NTSB Site)
- Incidents (FAA Inc Site)
- Enforcements
- Maintenance Alerts
- Airworthiness Directives
- Advisory Circulars
- STC Summaries
- Activity Data
- Airline Home Page Links

mma.jccbi.gov/alerts
- Current Edition
- Searchable Archive Files
- Electronic Subscription Sign-up
- SDR Link
- SDR Input
- Afs-600 Homepage Link

www.faa.gov
- History of the FAA
- Aviation Safety Information
- Accidents
- Incidents
- Enforcements
- Advisory Circulars
- Questions and Answers
- FAA Supported Sites

www.fedworld.gov
- FAA Libraries
- Continued Airworthiness Information
- Aircraft Service Information
- Airmen Training and Testing
- Regulatory Information
- Other Aviation Information

www.aopa.org
- AOPA History
- Air Safety Foundation
- Aviation Databases
- Message Boards
- Web Links
- Weather
- Flight Planning

www.eaa.org
- EAA History
- EAA Chapter Information
- Ultralights
- publications
- Aviation Links

www.safeflying.com
- Federal Aviation Regulations
- Service Difficulty Reports
- Maintenance Alerts
- Airworthiness Directives
- Accident/Incident Data
- Advisory Circulars
- STC Summaries
- Service Bulletin References

www.landings.com
- Aircraft manufacturers
- Airlines
- Aviation Bulletin Boards
- Flight Schools/FBO's
- Flying Clubs
- Aviation Databases
- Miscellaneous Aviation Information

www.avweb.com
- Aeromedical
- Aviation Law
- Aviation Databases
- News Wire
- Reviews
- Safety
- Weather

www.safety.com
- Aviation Safety Databases
- Regulations
- Inspection Checklists
- Safety Tips and Safety Items
- Airworthiness Information
- EAA Flight Advisor Program

www.airsafety.com
- Airworthiness Directives
- Service Difficulty and Mechanical Reliability
- Accident and Incident report databases
- Aviation Accident Reports
- Other Safety Information

For non-Web users, Special Reports and Hard Copies of data:
Federal Aviation Administration
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125

Aviation Data on the Web

Official Government sites:

FAA Aviation Information (AFS-620)	http://av-info.faa.gov
Regulatory Support Division AFA-600	http://www.mmac.jccbi.gov/afs/afs600
Aviation Data Systems Branch AFS-620	http://www.mmac.jccbi.gov/afs/afs600/adsb.html
Aviation Maintenance Alerts	http://www.mmac.jccbi.gov/alerts
FAA	http://www.faa.gov
Flight Standards Service	http://www.faa.gov/avr/AFSHOME.HTM
Fedworld	http://www.fedworld.gov
Office of System Safety (NASDAC)	http://nasdac.faa.gov
NASA_Aviation Safety Reporting System	http://olias.arc.nasa.gov/asrs

Public sites:

EAA	http://www.eaa.org
AOPA	http://www.aopa.org
Landings	http://www.landings.com
Airjet Airline News	http://home.att.net/~airjet
Aviation Safety Data Site	http://www.safetydata.com
AVWeb	http://www.avweb.com

DER Renewal

Mary Verneer, NY ACO

DER RENEWAL PROCEDURES

- AT THE END OF EACH MONTH, IDENTIFY DERS WHOSE APPOINTMENTS EXPIRE IN 60 DAYS
- A LETTER AND DER INTERACTION TRACKING FORM ARE SENT TO EACH DER IDENTIFIED ABOVE

DER RENEWAL PROCESS

- IF THE DER HAS NOT RESPONDED IN 30 DAYS, A REMINDER LETTER IS SENT
- AFTER RECEIVING THE TRACKING FORM, THE DER'S FILE IS RETRIEVED AND IS GIVEN TO THE ADVISOR ALONG WITH A PERFORMANCE EVALUATION FORM

DER RENEWAL PROCESS

- THE ADVISOR HAS 14 DAYS TO REVIEW DER'S PERFORMANCE
- THE ADVISOR ALSO MUST COORDINATE ALL EVALUATOR'S COMMENTS

DER RENEWAL PROCESS

- AFTER RECEIPT OF FILE FROM ADVISOR, THE DER COORDINATOR PREPARES RENEWAL LETTER, IF THE DER IS IN FACT BEING RENEWED FOR ANOTHER YEAR

DER RENEWAL PROCESS

- IF THE DER IS NOT TO BE RENEWED, A TERMINATION LETTER IS PREPARED. THIS IS A CERTIFIED LETTER AND IT GIVES THE DER 14 DAYS TO RESPOND AS TO WHETHER HE/SHE WANTS TO APPEAL.

DER RENEWAL PROCESS

- SPREADSHEET IS UPDATED TO INDICATE THE ACTION TAKEN (I.E., RENEWAL OR CANCELLATION)

Instructions for Continued Airworthiness

14 CFR 21.50 and 14 CFR XX.1529

1

Instructions for Continued Airworthiness

14 CFR 21.50 and 14 CFR XX.1529

- Early Aircraft* standards had no requirement for maintenance manuals
- Later rules required essential information
- These rules create a standard for information required to ensure continued airworthiness
- Other AW standards have equivalent sections

Slide 2

ICAW in Airworthiness Standards

14 CFR PART 23

§23.1529 and Appendix G for Normal, Utility, Acrobatic, and Commuter Category Airplanes

14 CFR PART 25

§25.1529 and Appendix H for Transport Category Airplanes

14 CFR PART 27

§27.1529 and Appendix A for Normal Category Rotorcraft

14 CFR PART 29

§29.1529 and Appendix A for Transport Category Rotorcraft

14 CFR PART 31

§31.82 and Appendix A for Manned Free Balloons

14 CFR PART 33

§33.4 and Appendix A for Aircraft Engines

14 CFR PART 35

§35.4 and Appendix A for Propellers

Slide 3

Instructions for Continued Airworthiness 14 CFR 21.50

- Holder of TC or STC shall provide ICAW to owner of each type of aircraft, engine, or propeller (applies to all TC'd products)
- Changes shall be available to any person required to comply with those instructions

Slide 4

Instructions for Continued Airworthiness 14 CFR 23.1529 (for example)

- Applicant must prepare ICAW in accordance with Appendix G
- May be incomplete at Type Certification if to be completed prior to 1st delivery or issuance of a standard Airworthiness Certificate

Slide 5

Appendix G

- ICAW for each airplane must include instructions for continued airworthiness for each product and appliance
  - Information relating to interface of products and appliances
  - If ICAW are not supplied by the manufacturer of the installed product or appliance, the ICAW for the airplane must include the information essential to the continued airworthiness of the airplane

Slide 6

Appendix G

- Applicant must submit program for distributing changes to instructions
- ICAW must be in the form of a manual or manuals as appropriate
  - Format must provide practical arrangement Prepared in English

Slide 7

Manual Requirements
Airplane Introduction Section

- Introduction-Explanation of features and data
- Description of airplane and its systems and installations
- Basic control and operation information
- Servicing information
  - Servicing Points, Fluids
  - Capacities, Pressures
  - Lubrication Information
  - Service Equipment
  - Towing, Jacking, Mooring and Leveling Information

Slide 8

Manual Requirements
Maintenance Instructions

- Inspection requirements
- Overhaul periods
- Troubleshooting
- Removal and Replacement of Parts and Products
- General Procedural Instructions

Slide 9

Other Manual Requirements

- Diagrams and information needed to gain access for inspections
- Details for special inspections required
- Information needed to apply protective treatments
- Data relative to fasteners-Identification, Torque, etc.
- List of special tools needed

Slide 10

Other Manual Requirements

- In addition, the following information must be furnished for commuter category airplanes (similar to Part 25)-
  - Electrical loads applicable to the various systems
  - Methods of balancing control surfaces
  - ID of primary and secondary structure
  - Special repair methods

Slide 11

Manual Requirements
Airworthiness Limitations Section

- Must be segregated, clearly distinguishable
- Provides mandatory replacement times and inspections
- Must be included in the principal manual
- Must contain a legible statement in a prominent location that reads:

"The airworthiness limitations section is FAA approved and specifies maintenance required under Sections 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA Approved"

Slide 12

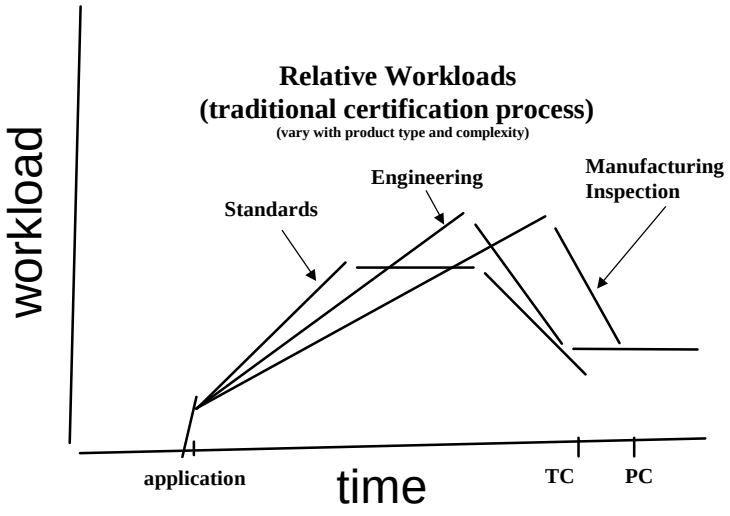
The FAA & Industry Guide to Product Certification

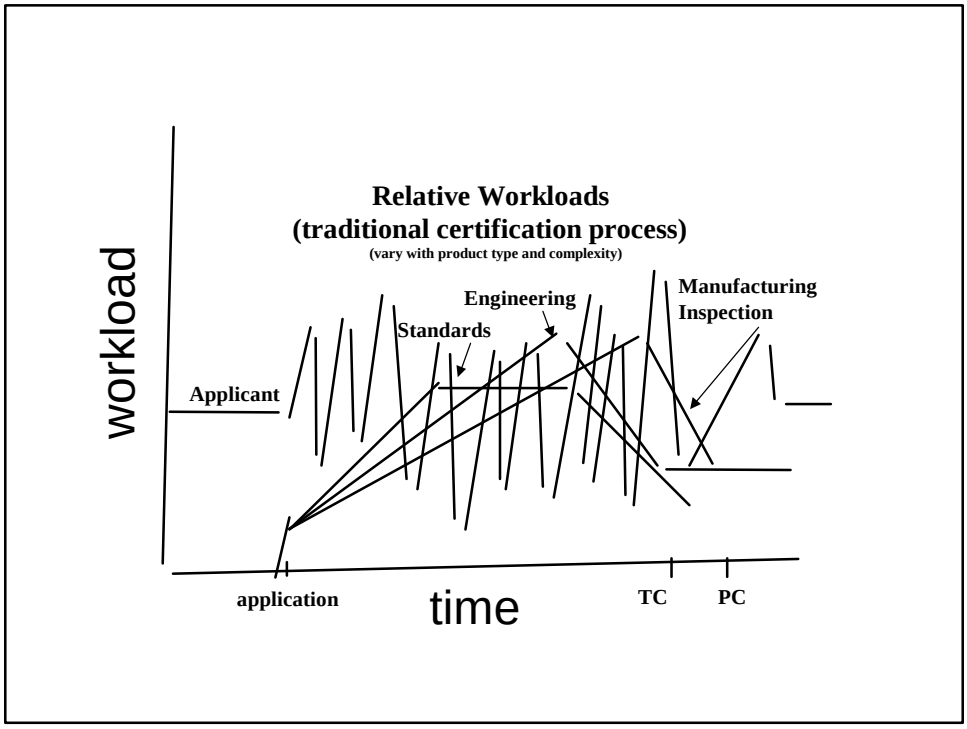
Product Certification Improvement Charter:

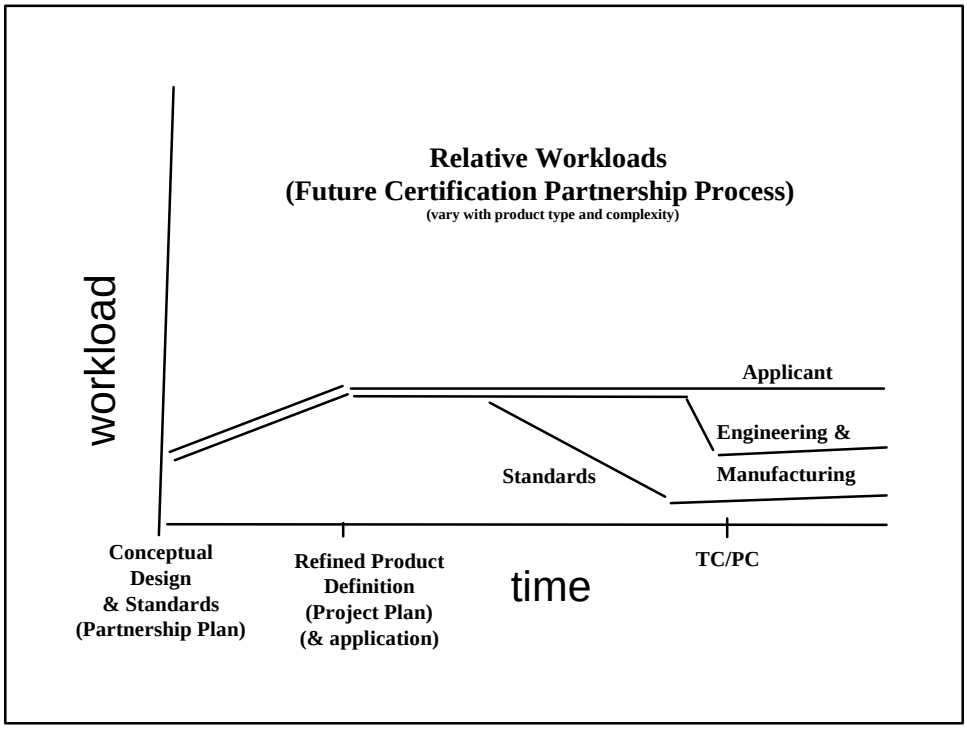
- **Base work on "Concept Definition" and report analysis**
- **Develop Operating Procedures**
  - Full system definition of the new business practice
- **Develop guidance**
  - A vehicle to give "muscle" to new process
- **Develop implementation strategy**
  - How to gain commitment
  - Communication
  - Training
- **Develop an on-going evaluation process**
  - Assessment methodology
  - Feedback system for continuous improvement

FAA/AIA/GAMA Certification Process Improvement Team

- U.S. Industry/FAA working together to improve the Product Certification process
- Commitment of all AIR Directorates/Divisions, GAMA, & AIA
- FAA/Industry Guide to the Product Certification Process:
  - Early communication & closure of certification basis
  - Agreement on certification plan (type & production), delegation, conformity, COS plan, and roles and responsibilities




Relative Workloads
(traditional certification process)
(vary with product type and complexity)
workload
Applicant
Standards
Engineering
Manufacturing
Inspection
application
time
TC
PC


Relative Workloads
(Future Certification Partnership Process)
(vary with product type and complexity)
workload
Applicant
Engineering &
Manufacturing
Standards
Conceptual
Design
& Standards
(Partnership Plan)
Refined Product
Definition
(Project Plan)
(& application)
time
TC/PC

Industry & FAA Feedback

- Applicant Needs from FAA
  - » **Provide early position on TC basis**
  - » **Allocate resources to fit customer schedule**
  - » **Involvement in key decisions**
- FAA Needs from Applicant
  - » **Communicate early and often**
  - » **Plan/keep the FAA informed of project status**
  - » **Accept new policy**
  - » **Use the appeal process**

Best Business Practices
(A Key Element)

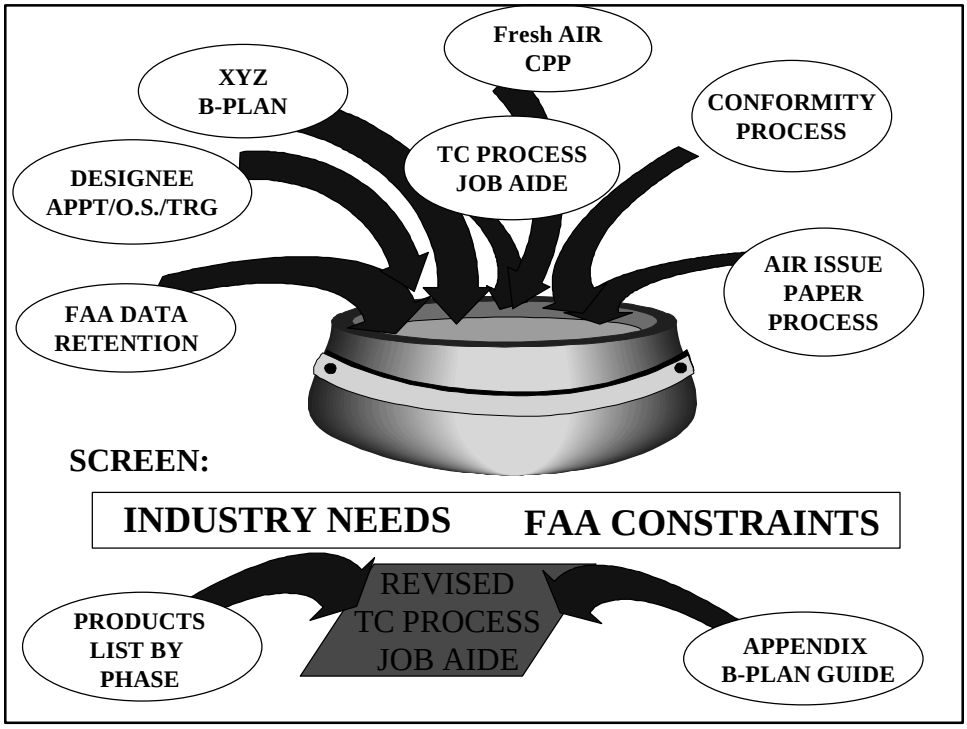
- Identified with each step in the TC process
- How our business practices are realized throughout the process, e.g.,
  - » Get organized to do the job
  - » Agree on clear timeframes & expectations
  - » Coordinate closely with applicant
  - » Show up prepared

Business Practices

- Teamwork
  - » All stakeholders
  - » Early involvement
  - » Clear/common understanding of
    - **--schedules**
    - **--resources**
    - **--milestones**
    - **--team composition**
    - **--critical issues**

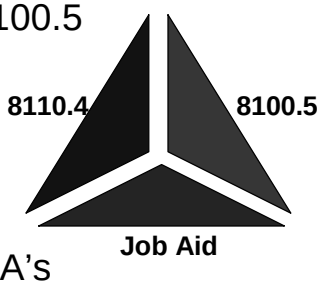
Business Practices

- Communications
  - » **Familiarization meeting**
  - » **Proper channels(PM focal pt)**
  - » **Confidentiality**
  - » **Timely(no surprises)**
  - » **FAA/FAA**
  - » **FAA/Applicant**
- Accountability
  - » **Clearly defined roles**
  - » **Accountability for performance**
  - » **Active management oversight and correction**



The Product Certification Guide

- A companion to 8110.4 and 8100.5
- Provides key information and guidance
- Promotes successful type and production certification work
- Addresses Applicant's and FAA's needs



This guide focuses on

- **Communication within the FAA and with the Applicant**
  - » **Work in partnership**
  - » **Resolve issues at working level constructively**
  - » **Management leadership when problems cannot be resolved at the working level**
  - » **Explain and understand the process**
  - » **Provide guidance & feedback**
  - » **Listen**
  - » **Solicit involvement in key decisions**

Two Major Elements

•Partnership for Safety Plan

- **Developed in advance of any specific projects**
- **Defines process for early familiarization & planning**
- **Establishes expectations, operating norms & deliverables**
- **Defines discipline & methodology**
- **Applicant & FAA Commitment**

•Product Specific Certification Plan

- **Developed for the conduct of each certification plan**
- **In concert with the Partnership for Safety Plan**
- **Project management tool**
- **Contains specific project procedures for delegation, conformity, issue resolution, etc.**
- **Applicant & FAA Commitment**

How the Guide Reinforces Business Practices...

- Key players and their role in a type certification project
- Each major step in the process
  - » what happens/what's produced
  - » who key players are
  - » best practices that promote success
- Responsibilities of each player for each step
- Matrix of key players and process steps

WHAT THIS GUIDE CONTAINS

✓ **INTRODUCTION**

- ✈ **Purpose**
- ✈ **Vision**
- ✈ **Accomplishing The Vision**
- ✈ **Product Certification Implementation Phases - Overview**
- ✈ **Process Certification Process Flow**

✓ **PHASES FOR PRODUCT CERTIFICATION:**

- ✈ **PHASE I: Partnership for Safety Plan**
- ✈ **PHASE II: Conceptual Design and Standards**
- ✈ **PHASE III: Refined Product Definition and Risk Management**
- ✈ **PHASE IV: Certification Project Planning**
- ✈ **PHASE V: Certification Project Management**
- ✈ **PHASE VI: Post Certification Activities**

✓ **DESCRIPTION OF KEY PLAYERS' ROLES**

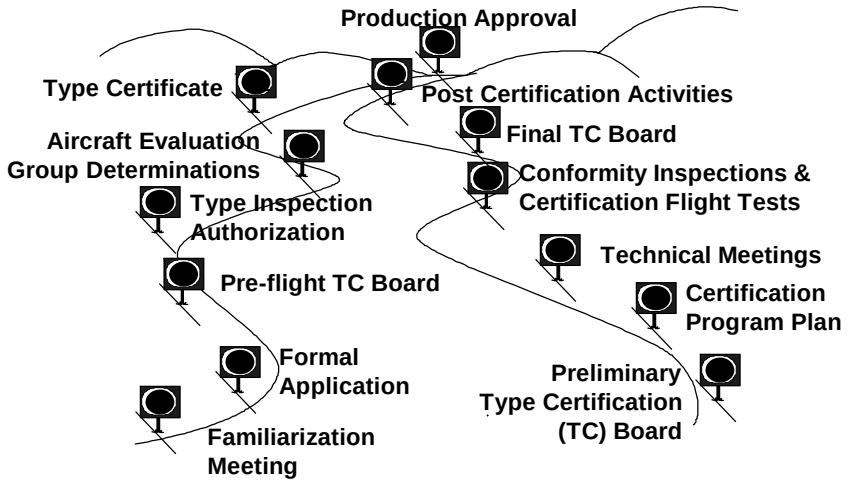
✓ **APPENDIX I: PARTNERSHIP FOR SAFETY PLAN**

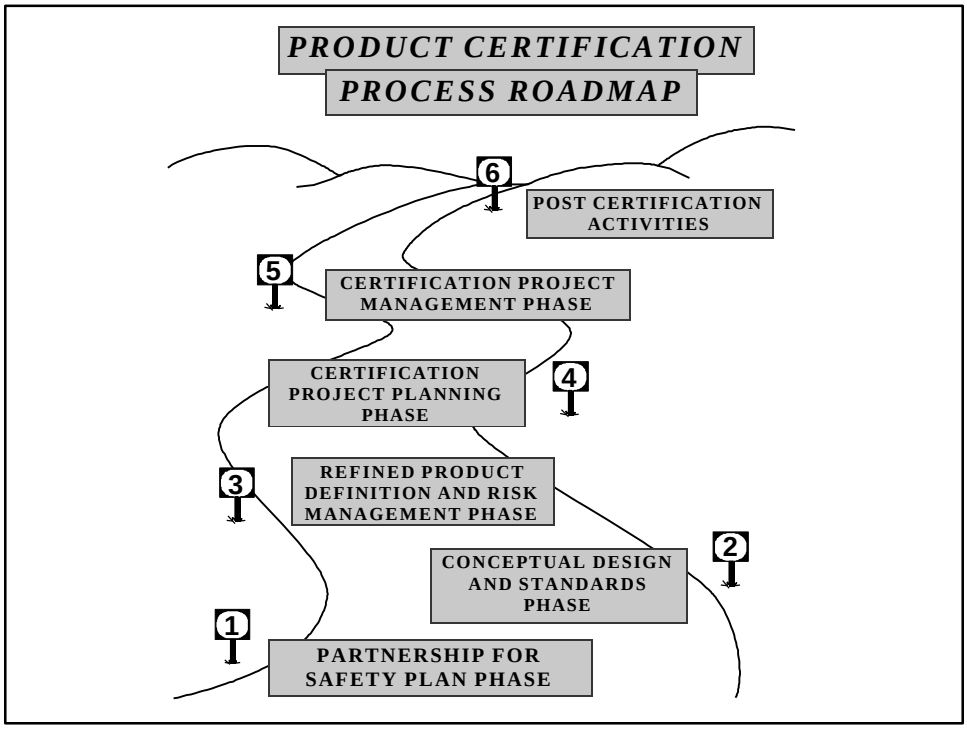
✓ **APPENDIX II: PROJECT SPECIFIC CERTIFICATION PLAN**

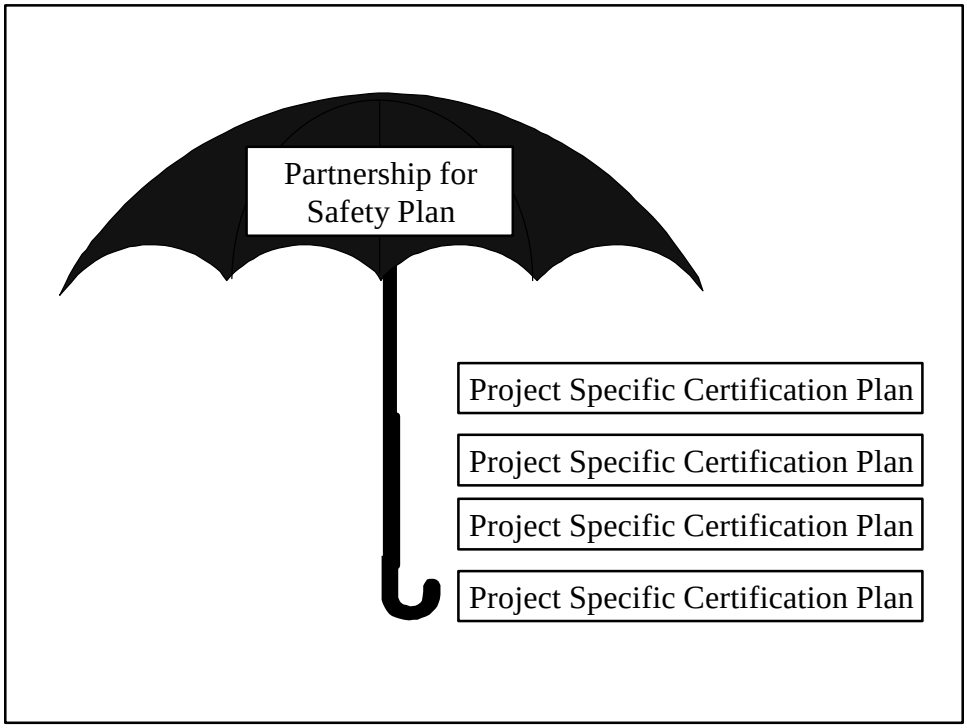
✓ **APPENDIX III: PROJECT EVALUATION FORMS**

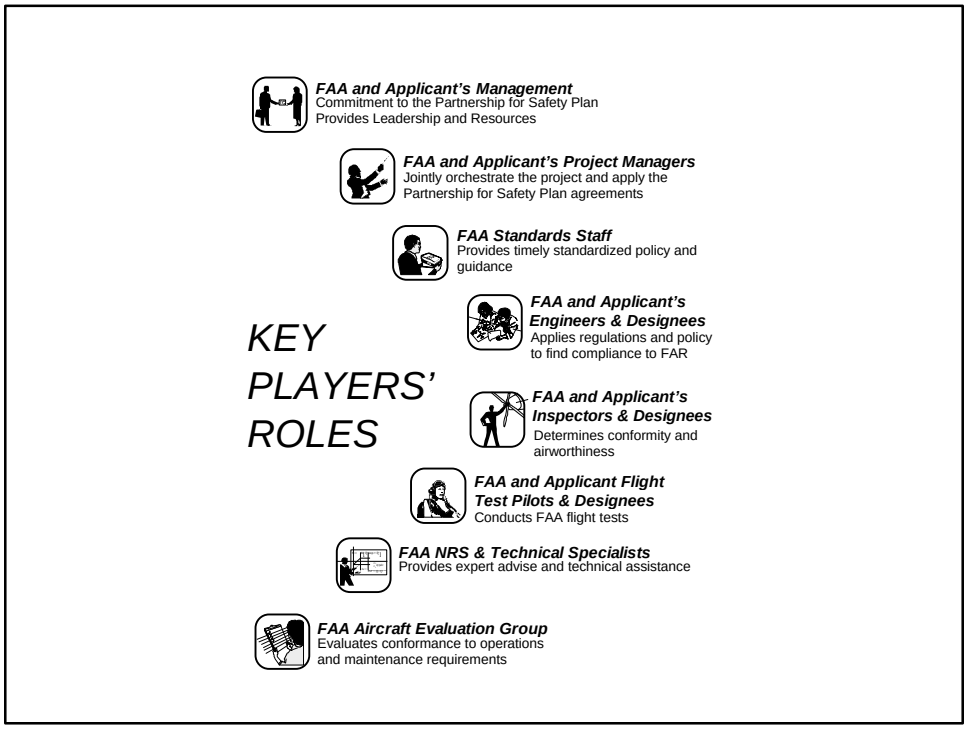
✓ **APPENDIX IV: GLOSSARY OF TERMS AND ACRONYMS**

Current Type Certification Process






Partnership for Safety Plan
Project Specific Certification Plan
Project Specific Certification Plan
Project Specific Certification Plan
Project Specific Certification Plan


KEY PLAYERS' ROLES
FAA and Applicant's Management
Commitment to the Partnership for Safety Plan
Provides Leadership and Resources
FAA and Applicant's Project Managers
Jointly orchestrate the project and apply the Partnership for Safety Plan agreements
FAA Standards Staff
Provides timely standardized policy and guidance
FAA and Applicant's Engineers & Designees
Applies regulations and policy to find compliance to FAR
FAA and Applicant's Inspectors & Designees
Determines conformity and airworthiness
FAA and Applicant Flight Test Pilots & Designees
Conducts FAA flight tests
FAA NRS & Technical Specialists
Provides expert advise and technical assistance
FAA Aircraft Evaluation Group
Evaluates conformance to operations and maintenance requirements

Partnership for Safety Plan

- **PARTNERSHIP FOR SAFETY:**

  1. GENERAL:
  2. CORPORATE PROGRAM PLANNING:
  3. COMMUNICATION & COORDINATION:
  4. DELEGATION:

- **CONTINUOUS IMPROVEMENT:**

  1. ISSUES RESOLUTION PROCESS:
  2. PERFORMANCE MEASURES:
     (a.) GENERAL:
     (b.) OPERATING NORMS:
     (c.) PROJECT REVIEW FORMS:

- **SIGNATORIES:**

Certification Process Norms

- **Within 2 weeks after application:**
  - Acknowledgment of application issued
  - FAA Certification Project Notification (CPN) issued

- **Within 1 month after application:**
  - Project team identified
  - Preliminary Type Certification Board Meeting (PTCBM) scheduled

- **Within 1 to 3 months after PTCBM:**
  - Proposed type certification (TC) basis G-1 issue paper prepared and processing begins (stage 1)
  - Project Specific Certification Plan (PSCP)drafted

Certification Process Norms

- **Within 4 to 6 months after PTCBM:**
  - Final TC basis G-1 issue paper closed
  - PSCP agreed and signed
- **Within 6 to 9 months after PTCBM:**
  - All issue papers closed
- **One Month prior to scheduled TC/STC issuance:**
  - Compliance documentation submittals should be scheduled over the course of a project to be completed by this point in time. More than one month may be needed in some cases, especially when submittals are not FAA designee approved or recommended for approval.

Certification Process Norms

- Additional norms may be necessary for other deliverables, major issues, design changes, or compliance requirements
- Such issues should result in agreed revisions to the PSCP with appropriate milestones for closure.
- Where appropriate, issue papers and a revised PSCP will be prepared within 1 month after identification of the issue along with a plan to achieve its resolution.
- FAA will not apply any new policy in such cases unless an unsafe condition exists that would require an Airworthiness Directive to be issued if the product or equivalent designs were in service.

Project Specific Certification Plan

· **TYPE CERTIFICATION:**

1. GENERAL:
2. PROJECT DESCRIPTION:
3. PROJECT SCHEDULE:
4. TYPE CERTIFICATION BASIS:
5. MEANS OF COMPLIANCE:
6. COMMUNICATION & COORDINATION:
7. DELEGATION:
8. TESTING PLANS:
   (a.) GENERAL:
   (b.) FLIGHT TEST:
   (c.) CONFORMITY:
9. COMPLIANCE DOCUMENTATION:

· **PRODUCTION CERTIFICATION:**

Project Specific Certification Plan

· **POST CERTIFICATION PROJECT REQUIREMENTS:**

1. COMPLIANCE SUMMARY DOCUMENT:
2. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA):
3. CONTINUED AIRWORTHINESS MANAGEMENT:
4. DATA RETENTION:

· **CONTINUOUS IMPROVEMENT:**

1. ISSUES RESOLUTION PROCESS:
2. PERFORMANCE MEASURES:
   (a.) GENERAL:
   (b.) OPERATING NORMS:
   (c.) PROJECT REVIEW FORMS:

· **SIGNATORIES:**

Evaluation and Continuous Improvement

PROJECT REVIEW FORMS

- **One Form for each Phase**
- **Jointly prepared** by FAA and Applicant Project Managers with other team members as appropriate to any issues
- **Short term:**

  First three projects from each ACO will be evaluated by an Implementation review CPI subteam

- **Long Term:**

  Forms are retained in Project file compliance summary Document for local and national evaluation

  ACOMT & MIMT have a task to institutionalize the sharing of lessons learned and implementation of corrective action with AIR100 & 200

PROJECT REVIEW FORM
PHASE V: CERTIFICATION PROJECT MANAGEMENT

Project Name:_____
FAA Project Number:_____

Program Managers:
Names: Applicant's:_____ **FAA' s:**_____
Company:_____ **Office:**_____

Were the following Deliverables completed? (check applicable):

- ❑ Meeting minutes and correspondence to document decisions, agreements, schedules, milestones, and action item assignments
- ❑ Completed test plans/reports, conformity requests, inspections and reports, compliance documentation
- ❑ Issue Papers, Special Conditions, Exemptions, Equivalent Safety Findings
- ❑ Compliance findings
- ❑ Type Certificate/STC/amendments/PC

Answer the following questions appropriate to this Phase
(attach separate sheets as needed):

Ph5	Questions
x	1 Were the milestones based on the norms?
x	· If not within the norms, Why?
x	2 Were the milestones periodically validated and mutually readjusted by the Specific Certification Plan signatories throughout the program as needed?
x	3 Were the final milestones met?
x	4 Was the delegation plan followed?
x	· What worked well?
x	· What didn't work well?
x	5 Was the Issue Resolution Process established/applied as needed?
x	· What worked well?
x	· What didn't work well?

Implementation

- **Challenge Team October 27th**
- **Finalized Guide January 1999**
- **CPI Orientation Training: As Teams form**
- **Communication:**
  - **Executive level and detail level briefing materials prepared**
  - **GAMA TPC, RTCA TF4, ACOMT, MIMT briefed**
- **Implementation:**
  - **Identify Industry Partner candidates**
  - **Establish orientation**
  - **Evaluate first three in each ACO**

DER-To-Inspection Designee Conformity Notification Process

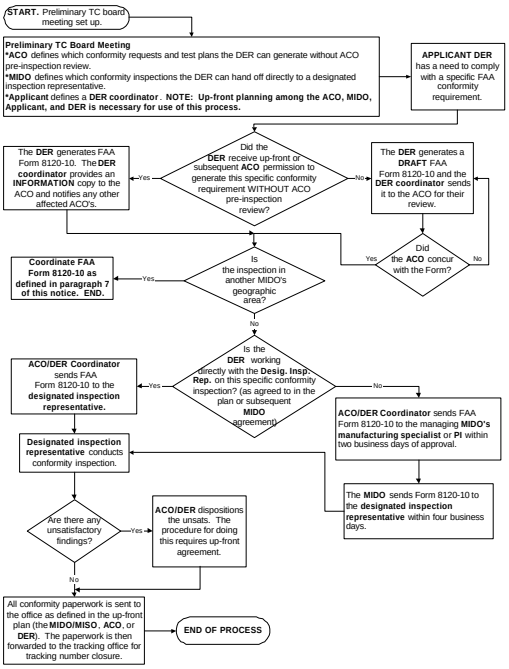
- **Objective- Develop a more efficient process that allows the DER to provide timely notification to a designated inspection representative when a conformity inspection is needed. A major element for success is to ensure that all affected field offices understand the process prior to implementation.**
- **Notice 8110.76 issued September 1998**
- **IVT November 1998**

Background

- **Industry Comments:**
  - » **Delays in processing conformity requests**
  - » **Designees not getting enough lead time to schedule an inspection**
  - » **Unclear Process in Order 8110.4**

Process Requirements

- Up front planning
- Hardware selection criteria
  - » New materials, process, technology
  - » Existing production system
  - » Germane vs compliance hardware
- Delegation plan
  - » What, who, why, how, oversight
- FAR 21.33 and 21.53 obligations



What's next?

- Your commitment
  - » Demonstrate Leadership
  - » Understand the job aid
  - » Use the job aid in your type certification work (make it a "living document"!)
  - » Provide feedback on effectiveness
    - – **through FAA and Industry Management Teams**

DOA, DAS, & SFAR 36 Implementation Plan

DAS TEAM

1

Meeting Expectations

- **Justify policy changes proposed in the DDS Order**
- **Discuss DDS Implementation plan**
  - Propose a revision to DDS charter
  - Establish "new" release date for DDS Order
  - Allocate funding for proposed workshop
- **Establish "Go-forward Position" to be submitted for AIR-1/2 & AFS-1 concurrence**

2

Justification for Policy Changes

✈ Significant Changes in DDS Order

- Clarifies requirements for an application package [FAR 21.235(a)]
  - ➢ Requires Manual
- Clarifies requirements in the Procedures manual (FAR 21.441 & SFAR 36 section 6)
  - ➢ Requires establishment of an FAA focal point (i.e. administrator)
  - ➢ Establishes in-house training

3

Justification for Policy Changes (cont'd)

✈ Significant Changes in DDS Order (cont'd)

- Clarifies requirements for inspections (FAR 21.249, 21.449, & SFAR 36 section 9)
  - ➢ Requires self audits
  - ➢ Establishes "engineering" audits
- Clarifies "Off-site" activity for DASs
- Recommends Memorandum of Understanding (MOU)

4

Justification for Policy Changes (cont'd)

- **Proposed changes do not conflict with the law or rules**
  - Proposed changes are encompassed in the rules and only provide clarification
    - The DDS Order provides clarifications of the functions performed by the FAA or their agents
    - The DDS Order does not effect the eligibility requirements specified in the rules

5

Justification for Policy Changes (cont'd)

- **What is an "Order" (ref. Order 1320.1D)**
  - The primary means of issuing guidance, policy, instructions, and work information within the FAA
    - Written information that is essential to the administration or operation of the agency or any of its programs
    - Directives do not include rules, regulations, airworthiness, and other rulemaking documents
  - Delegated Organizations are agents of the administrator
    - Delegations are guided by the same policy & procedures as the FAA (e.g. Orders)

6

Justification for Policy Changes (cont'd)

- **FAA Authority (Ref. Order 1100.2C)**
  - Aircraft Certification has the authority to develop regulations, standards, policies, directives, and guidance material for FAR 21, 183, & SFAR 36
  - Proposed DDS Order
    - Ensures consistency
    - Defines a verifiable, unified process
    - Provides public/CAA awareness/acceptance
    - Excellent transition for ODA

7

DDS Charter Highlights

- Develop an Order that consolidates and integrates organizational delegation policy pertaining to DOAs, DASs, and SFAR-36 organizations into one Order.
  - **Directive material does not currently exist that addresses all functions performed by delegated organizations**
- The DDS Order will build upon previously developed material and develop new material to cover appointment and oversight for organization's delegated functions.

8

DDS Charter Highlights (cont'd)

- Develop standardized processes for organizational functions
- Incorporate the draft ARAC ODA material, to the extent feasible (allowable by law), to provide a smooth transition for ODA
- Published Order 1st Qtr. 99

9

Implementation Plan

- **Approve revised Charter 3/26/99**
- **DDS Meeting (DC) 3/29-4/2/99**
  - Complete disposition of comments
  - Develop matrix of changes & identify new requirements
  - Develop DIN/ODA requirements
  - Invite industry/HQ FAA for open discussion
    - Develop framework for workshop/prototype
    - Cost of prototype vs budget assessment

10

Implementation Plan (cont'd)

- **Draft final DDS Order 4/16/99**
  - Submit to Industry/Selected FAA offices
- **FAA/Industry workshop (DC) 5/17/99**
  - Market advantages to industry/FAA
  - Assess impact on industry
  - Address pro's and con's

  Note: This proposed workshop is unfunded

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Implementation Plan (cont'd)

- **AIR-1/AFS-1/AVR letter authorizing evaluation of DDS Order in the field 5/28/99**
- **DDS Transition Evaluation 7/1/99**
  - Brief
  - Make regulations and guidance available
  - Establish exemptions/ground rules
  - Draft new manuals
  - Select organizations (FAA/Industry)
  - Define outcome
  - Self audit evaluation

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Implementation Plan (cont'd)

- **Evaluation Program** **12 months**
- **Follow-on assessment of program** **7/00**
- **Re-coordination with field** **7/00**
- **Final clearance/Release document** **10/00**

13

Recommendations

- **Obtain ACMT and AFS buy-in**
  - Complete development of the DDS Order with the "new" requirements
  - Revise DDS Charter to include the implementation plan and extend release date to 10/00
  - Allocate travel funding for proposed FAA/Industry Workshop

14

Organization Delegations
(DOA, DAS, SFAR-36, & ODA)

5/5/99

1

Overview

- FAA Vision for Organizational Delegations
- Upcoming Policy
- Future Efforts
- Current Status
- Q & A

2

FAA VISION

- Expand Organizational Delegations
  - Establish a comprehensive approach to delegating
  - Provide a smooth transition from existing Delegation Systems
- Ensure compatibility with other Civilian Aviation Systems
- Achieve this vision in two phases

3

Phase I

Standardization of Existing Organizational Delegations

4

Current Types of Organization Delegations

- Delegation Option Authorization (DOA)
  - FAR Part 21 Subpart J
- Designated Alteration Station (DAS)
  - FAR Part 21 Subpart M

5

Current Types of Organization Delegations - cont'd

- Special Federal Aviation Regulation Number 36 (SFAR -36)
  - FAR Part 121 - Special Regulation
- Organizational Designated Airworthiness Representative (ODAR)
  - FAR Part 183.33

6

Current Functions Delegated to Organizations

- DOA Organizations makes findings of compliance for new Type Certificates and Amended TC's, issue Experimental Certificates, Airworthiness Certificates, Airworthiness Approval Tags for Engines, Propellers, and Parts
- DAS Organizations issue Supplemental Type Certificates, Experimental Certificates, Amending Standard Airworthiness Certificates

7

Current Functions Delegated to Organizations - con't

- SFAR 36 Organizations develop data for major repairs and approve articles/products for return to service
- ODAR Organizations issue original/standard Airworthiness Certificates and Special Flight permits

8

Standardization of current Organizational Delegations

The FAA is developing an Order that consolidates and integrates existing organizational delegation policy into one order. This new Order will include:

Selection and Appointment Procedures

- Qualifications for Authorized Representatives
- Responsibilities and Authorized Functions
- Contents for a Standard Procedures Manual
- Oversight and Training

9

Phase II

FAA's Future Plan for Organization Delegation

10

FAA's Future Plan

- Continue To Delegate while maintaining integrity
- Expand Organizational Delegations
  - Expand who is eligible to include Engineering and Flight Standards
  - Available to an organization (both large/small companies and National Organizations)
  - Aviation Rulemaking Advisory Committee is developing new concept (Organizational Designation Authorization- ODA)

11

What is ODA?

- ODA is new Subpart D to FAR Part 183
- All FAA delegation authorizations will now be in FAR Part 183
  - Subpart D to FAR Part 183 replaces the rules for DOA, DAS, SFAR-36, and ODAR
    - Existing Authorized Organizations will be terminated 3 years after Subpart D is released
  - ODA will not replace Individual Designee's (e.g DER's, DMIR's, DAR's, DPE's, DME's, DPRE's, DFEE's, DFNE's or DFNE's)

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What is ODA? - cont'd

- Expands current organizational delegations concepts
  - Address an organization not an individual
  - Address not only manufacturers, air carriers, repair stations, but also engineering, flight schools, agricultural and external load operators.
  - Provides FAA a better way to utilize its resources
  - Increases industry efficiency

13

ODA Eligibility (FAR 183.47)

- Includes all persons who are now eligible under subpart J or M of FAA Part 21, SFAR36, ODAR, and is broaden to include TSO holders and STC holders
- Have significant and appropriate experience in performing the functions for which the ODA is sought
- Is not intended to allow applicants who have little or no experience with FAA certification procedures to be eligible for an ODA

14

Functions (FAR 183.49)

- Approving technical data.
- Finding compliance with airworthiness requirements.
- Making type design data approvals and changes to type design approvals.
  - Can not issue a TC
- Issue STC's

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Functions (FAR 183.49) - cont'd

- Determining conformity requirements and performing conformity inspections.
- Issue Airworthiness Certificates and related approvals.
- Approve changes to production approvals
  - e.g. Amend PLR, can not issue PC

16

Functions (FAR 183.49) - cont'd

- Issue operating certificates under FAA Part 133 and Part 137
- Issue air agency certificates under FAA Part 141
- Issue training center certificates under FAA Part 142
- Any other privileges deemed appropriate by the Administrator.

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Matrix Functional Activities

DESIGNATED FUNCTIONS	APPLICABLE FAA (E,M,O) (1)	ODA TYPE: TYPE CERT CHAP 4	PROD CERT CHAP 5	STC CHAP 6	CERTs & APPROVALS CHAP 7	TSOA CHAP 8	MAINT, ALTER & OPS CHAP 9	GENERAL AV. OPS CHAP 10	PARTS MFGRNG CHAP 11
A. APPROVE TECHNICAL DATA (2)	E	X		X		X	X		X
B. ESTABLISH MEANS OF COMPLIANCE TO AIRWORTHINESS STANDARDS	E	X		X		X (3)	X		X
C. FIND COMPLIANCE TO REGULATORY REQUIREMENTS (2)	E	X		X		X (3)	X		X
D. ISSUE STCS	E			X					
E. APPROVE OR ACCEPT MANUALS/SUPPLEMENTS	E,M,O	X (E)	X (M)	X (E)		X (E)	X (O,E)		X (E,M)
F. APPROVE AIRWORTHINESS LIMITATION INFORMATION	E	X		X		X (4)	X		X(E)(5)
G. ISSUE CERTIFICATES & APPROVALS	M,O	X	X (M) (6)	X	X (M) (6)	X (M) (8)	X (O)	X (O) (7)	X (M) (8)
H. ESTABLISH CONFORMITY REQUIREMENTS	E,M	X(E)	X(M)	X(E)		X(E,M)	X(E)		X(E,M)
I. DETERMINE CONFORMITY	M,O	X	X (M)	X	X (M)	X (M)	X (O)		X (M)
J. AMEND PRODUCTION RECORDS	M		X			X	X		
K. APPROVE AMOC TO AIRWORTHINESS DIRECTIVES	E	X		X		X (4)	X		X (9)

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Procedures Manual (FAR 183.53)

- Certification and approval functions for specific categories of products
- Procedures for performing the authorized functions
- ODA administration procedures that explains the ODA organizational structure and responsibility
- Description of facilities used

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Procedures Manual (FAR 183.53) - cont'd

- A process and procedure for self audit - including supplier of services and products to the ODA.
- Requirements, methods, and procedures for communicating and consulting with the FAA
- Required training for ODA staff
- Content and manner of maintaining Records

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Procedures Manual (FAR 183.53) - cont'd

- ODA Staff position descriptions and required qualifications
- Procedures for appointing, maintaining, and removing ODA staff
- Method of documenting and determining approval requirements for changes in organization and facilities
- Process and procedures for revising the procedures manual

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Functions the FAA Reserves and does not Delegate

- Inherently Governmental Functions such as Determining Certification Basis, Special Conditions, Equivalent Level of Safety, Surveillance and Oversight are reserved for FAA only
- Issuance of Original Certificates (e.g. TC, PC, TSOA, and Repair Stations) are reserved for FAA only
- New Technological Advances and Regulatory Consequences are reserved for FAA only

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Functions the FAA Reserves and does not Delegate - con't

- Functions that are related to Air Carrier operations such as:
  - Issuance of training center certificates under Part 142 for approval of air carrier training programs
  - Determination of operational suitability
  - Approval of Master Minimum Equipment List
  - Approval of Air Carrier Minimum Equipment List
  - Approval of flight crew operating manuals
  - Instructions for continued Airworthiness, including MRB and associated maintenance documents

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Today's Status

PHASE 1

- Draft Order for Existing Organization Delegations completed by 3Q99
- Prototype draft Order for one year
- FAA/Industry workshop on draft Order scheduled for July '99 in Atlanta
- FAA targeting releasing Draft Order by end of FY 00

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Today's Status - cont'd

PHASE II

- ODA NPRM Draft Number 15 and AC have been submitted to FAA 10/98.
  - FAA is targeting for summer '99 release of the ODA NPRM & AC
- Draft ODA Order is being developed
  - Phase I FAA Order is being used as the baseline

Any Questions?

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DER Recurrent Seminar Evaluation Form

May 5, 1999 Long Island, NY

Please answer the following questions. Your response will help us prepare for future DER seminars.

Part I: About the Participant

1. I have been a DER for:
   ___ 0 – 2 years
   ___ 2 – 5 years
   ___ More than 5 years

   If not a DER, check the one that applies:
   ___ Other _____
   ___ DAS/DOA/SFAR-36 Staff Member
   ___ Candidate DER

2. In my capacity as an engineer, I evaluate data for the FAA:
   ___ while employed by a company (company name):_____)
   ___ as an independent consultant
   ___ not applicable

Part II: About the Seminar – Place an X under the response selected for each item.

	Excellent	Good	Fair	Poor
3. The organization and structure were:	_____	_____	_____	_____
4. The length of the session was:	_____	_____	_____	_____
5. The relevance of the session was:	_____	_____	_____	_____
6. The materials/handouts were:	_____	_____	_____	_____
7. Overall satisfaction with this session is:	_____	_____	_____	_____

Part III: About the Instruction

	Excellent	Good	Fair	Poor
8. Examples and explanations:	_____	_____	_____	_____
9. Relating the training to the job:	_____	_____	_____	_____
10. Responsiveness to participants' views:	_____	_____	_____	_____
11. Overall quality of the instruction:	_____	_____	_____	_____

Part IV: About the Facility

	Excellent	Good	Fair	Poor
12. Conference room/facility:	_____	_____	_____	_____
13. Seating arrangement:	_____	_____	_____	_____
14. Parking (availability, location, facility)	_____	_____	_____	_____

Please continue on the other side

15. Please provide any comments and/or recommendations for improving this General Session.

16. What topics would you like to see covered in future seminars?

Part V: About the Sessions

Please rate the topics.

	Extremely Beneficial	Worthwhile	Limited Benefit	No Benefit
17. Policy Update:	_____	_____	_____	_____
18. Internet Access:	_____	_____	_____	_____
19. DER Renewal:	_____	_____	_____	_____
20. DER Legal responsibility:	_____	_____	_____	_____
21. Instructions for Continued Airworthiness:	_____	_____	_____	_____
22. Certification Process Improvement:	_____	_____	_____	_____
23 Organizational Delegation:	_____	_____	_____	_____